

# Sub-Metering

## INFORMATION KIT

Last updated: April 2019



Unitywater

Welcome to the Unitywater Sub-Metering Information Kit.

This kit is designed to provide customers with all the relevant information they require to make the appropriate decisions in relation to installing a sub-meter.

In this kit, you will find the following information:

- Sub-Metering fact sheet
- Application to install sub-meters to a new or existing development (form)
- Sub-Metering Policy
- Sub-Metering Policy – Technical Specification
- Notice to water service provider – installation of sub-meters (form)
- Assessment checklist – sub-meters (sample form)

We trust you will find this information useful.

In the event you require further information about sub-metering, please don't hesitate to **contact Unitywater** using the following channels:

- Web: [www.unitywater.com/sub-meters](http://www.unitywater.com/sub-meters)
- General enquiries: (07) 5431 8333
- Customer Service Counters (Monday to Friday, 8.30 – 5pm):
  - 33 King Street, Caboolture
  - 8-10 Maud Street, Maroochydore
- Mail: Unitywater, PO Box 953, Caboolture Qld 4510
- Email: via [www.unitywater.com](http://www.unitywater.com) and submit an online enquiry form.



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# Sub-Metering Fact Sheet

## What is sub-metering?

Water sub-metering is the implementation of a multi-water meter system that allows multi-unit property owners to measure their own individual water usage and be charged for their respective water consumption.

Typical users of sub-metering are units, duplexes, townhouses, apartment complexes, and commercial buildings.

## Is sub-metering mandatory in new developments?

Yes it is. On 1 January, 2008, the Queensland Plumbing and Wastewater Code (*QPW code*) made it mandatory to install sub-meters in all new multi-unit developments and some non-residential premises.

## Why is sub-metering useful?

Prior to the introduction of the *QPW code*, it was not mandatory to install water meters within multi-unit residential premises and commercial premises.

Premises built prior to 1 January 2008 typically have a single water meter for the property and are charged for water consumption on a pre-determined apportionment schedule.

This means that in these circumstances, individual lot owners have no knowledge of their individual water use and consequently may not be encouraged to reduce their individual consumption.

Sub-metering enables water service providers such as Unitywater to provide water consumption information to individual unit owners and directly charge those owners for their actual water consumption. It's a fair and equitable solution to ensure the user pays for their usage.

## Is sub-metering mandatory in existing developments?

Existing developments are exempt from the conditions of the *QPW code*. This is because it may be impractical to sub-meter all units/lots in the existing complexes.

It is optional whether an existing complex elects to install sub-meters. Should they elect to do so, they will need to follow the same requirements for new premises.

If the owners of the existing development decide to proceed with the installation of a sub-meter, a body corporate resolution is required and the installation is at the cost of the property owner or body corporate.

## What is Unitywater's policy on sub-metering?

In April 2019, Unitywater adopted a sub-metering policy and associated technical specification to address the requirements of the *QPW code*.

Copies of the policy, the technical specification and the relevant application forms are available at [www.unitywater.com](http://www.unitywater.com).

## Once sub-meters have been installed, when do customers receive their first individual account?

Two official readings (which currently occur quarterly in the Moreton Bay region and half-yearly in the Sunshine Coast) are required before water usage at the complex can be charged to the individual unit owners.



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## Why are two meter readings required before individualised accounts can be sent out for newly sub-metered developments?

There are a number of reasons for this:

- 1) Readings taken at the time of “commissioning” the sub-meters cannot be used for billing purposes as the master meter(s) is only read quarterly (Moreton Bay) and bi-annually (Sunshine Coast), which impacts all charges.
- 2) Two meter readings are required to determine the amount of water that has passed through the sub-meters during a certain period of time, ie. between official meter readings.
- 3) After these two official readings have been obtained, the individual unit meters are then recorded by the meter billing team as “in-line” meters to the main parent meter(s). Any difference (shortfall) between the water usage recorded through the main parent meter(s) and the combined total water usage recorded for all the individual “in-line” meters is deemed to be common property water usage and is charged to the Body Corporate.
- 4) Without the two readings from all meters within the complex (including the main / parent meter) it is impossible to accurately determine the common area water usage charges to be billed to the Body Corporate.

## How are retro fitted sub-meters read if they are located inside units?

All sub-meters are to be accessible by Unitywater (with or without an automated reading system in place). This means that if sub-meters are located inside units, Unitywater is unable to send an account based on individual sub-meter readings.

For Unitywater to recognise and read retro fitted sub-meters which are based outside the unit, an application is to be submitted and approved.

## How do I access more information about sub-metering?

- Web: [www.unitywater.com/sub-meters](http://www.unitywater.com/sub-meters)
- General enquiries: (07) 5431 8333
- Customer Service Counters (Monday to Friday, 8.30 – 5pm):
  - 33 King Street, Caboolture
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- Email: via [www.unitywater.com](http://www.unitywater.com) and submit an online enquiry form.



Unitywater

ABN: 89 791 717 472

# Application to install sub-meters to a new or existing development

**Postal address**

PO Box 953  
Caboolture Qld 4510

**Unitywater**

Ph: (07) 5431 8333  
Fax: (07) 5431 8288

**Internet**

[www.unitywater.com](http://www.unitywater.com)  
[Ask.Us@unitywater.com](mailto:Ask.Us@unitywater.com)

**Applicant details:**

Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Address: \_\_\_\_\_

Postal address: \_\_\_\_\_

Daytime contact number: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Subject property information:**

Location where service is required: \_\_\_\_\_  
*(If same as postal address, write "as above")*

Real property description Lot: \_\_\_\_\_ Plan: \_\_\_\_\_

Owner: \_\_\_\_\_

**Sub- metering information:**

This application must be accompanied by preliminary drawings indicating the location of the master meter at the boundary, all lots or units to be sub-metered and the proposed location of sub-meters and any automated meter equipment.

In the case of an existing development, evidence of a decision by the body corporate to pursue sub-metering for the entire development is also a requirement.

**Customer summary:**

By signing this application the applicant confirms that they have the authority of the owner of the new development or the body corporate of an existing development to submit the application.

The applicant also confirms that they have reviewed current versions of Unitywater's sub-metering policy, technical specification and fact sheet and that this application meets the requirements of the policy and technical specification.

Signature of applicant: \_\_\_\_\_ Date: \_\_\_\_\_

**Office use only**

Customer request number: \_\_\_\_\_  CSO check – plans and information provided as per above requirements

**Privacy Statement**

Unitywater is collecting your personal information for the purpose of providing the requested service. The collection of this information is authorised under the South East Queensland Water (Distribution and Retail Structuring) Act 2009. Your information will not be given to any other person or agency unless required by law or we have your permission in writing.



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INS0005

# Sub-Metering Policy

Policy Number	INS0005
Policy Sponsor	Chief Operating Officer
Policy Manager	Strategic Asset Management Manager
Date Approved	8/4/2011
Date Last Reviewed	n/a
Related Documents	<p>Sub-Metering Policy – Technical Specification</p> <p>This policy INS0005 supersedes the previous policies described below:</p> <ul style="list-style-type: none"><li>• Moreton Bay Regional Council policy 49-2150-001 titled ‘Sub-Metering of Community Title Schemes’.</li><li>• Maroochy Shire Council sub-metering policies adopted 21 Sep 1995.</li></ul>

## 1. Introduction

Prior to the introduction of the new Queensland Plumbing and Wastewater Code (*QPW code*) on 1 January 2008 it was not mandatory to install *water meters* within multi-unit residential premises and commercial premises. This meant that in most circumstances individual lot owners had no knowledge of their individual water use and consequently may have been discouraged in their attempts to reduce their individual consumption. As from 1 January 2008 it is mandatory to install *sub-meters* in all new multi-unit developments and some non-residential premises. This will enable *water service providers* to directly charge the owners of separate lots in new buildings for their actual water consumption.

## 2. Purpose

The purpose of this policy is to:

- provide a framework for Unitywater’s employees and consumers/customers in relation to *sub-metering* of individual units/lots for *new developments*, and *existing developments* if the *management* of the *complex* decides to install *sub-meters*;
- enhance the effectiveness of Unitywater’s water charging system by permitting pay for use for all consumers/customers; and
- raise customer awareness of water consumption and the contribution of individual consumers/customers to the overall water consumption.

### 3. Applicability

The *QPW code* requires any *meterable premises* drawing a water supply from Unitywater's infrastructure to install a water meter to measure the amount of water supplied to the premises. The *QPW code* defines *meterable premises* as:

- all *Class 1* buildings; and
- each lot within a community title scheme, including the common property, in a water service provider's area; and
- the sole occupancy unit of a *Class 2, 4, 5, 6, 7 or 8* building in a *water service provider's* area; and
- each *storey* of a *Class 5* building in a *water service provider's* area where the building consists of more than one *storey* and *sole occupancy units* are not identified at the time of the building's plumbing compliance assessment.

*Existing developments* are exempt from the conditions of this policy. This is because it may be impractical to sub-meter all units/lots in the existing *complexes*. It is optional whether an existing *complex* elects to install *sub-meters*. Should they elect to do so they shall be responsible for all associated costs and must follow the same requirements as for new premises.

*Sole occupancy units* in certain *classes* of buildings (i.e. *Classes 2, 4, 5, 6, 7 and 8*) which are exclusively occupied must be provided with *sub-meters*. For example, where a shop is split into multiple shops to become *sole occupancy units* then the premises must be fitted with *sub-meters*. Where the configuration of the units changes, *sub-meters* will need to be retrofitted to the new configuration.

Duplexes that are part of a *community title scheme* would also need to comply with this policy. Duplexes that are not part of a *community title scheme* need to comply with any Unitywater policies on water metering.

## 4. Definitions

**Table 1 – Terms used throughout the policy with corresponding meanings**

<b>Term</b>	<b>Meaning</b>
<i>AMR</i>	The term <i>AMR</i> means Automatic Meter Reading and also includes Digital Electronic Readouts ( <i>DER</i> ) such as a display panel that can be scrolled through to read the respective sub-meter consumption.
<i>accessible</i>	The term <i>accessible</i> for water meter reading, maintenance and/or replacement purposes, means accessible within reasonable time (between 8 am-5 pm), with the sub-meters being located in a non-locked enclosure requiring a non-key access (PIN code), and not being obstructed by vehicles or other plant or equipment or vegetation.
<i>applicant</i>	An <i>applicant</i> is the Body Corporate of an existing <i>complex</i> that has made the decision to retrofit sub-meters to ALL lots within the <i>complex</i> .
<i>body corporate</i>	The term <i>body corporate</i> refers to a corporation or body of persons or even an individual, with a legal existence distinct from the individual person(s) making up the corporate entity. The purpose of the body corporate is to manage common property.
<i>boundary</i>	<i>boundary</i> means the area between the property external walls and pathways, streets or fence.
<i>building classes 1 to 10</i>	Building classifications as defined by the Building Code of Australia – Classification of Buildings. Some common classes being: <ul style="list-style-type: none"> <li>• Class 1a – detached dwelling or an attached dwelling separated by a fire-resisting wall.</li> <li>• Class 2 – a building containing more than 2 or more sole-occupancy units each being a separate dwelling.</li> <li>• Class 5 – an office building used for commercial purposes.</li> <li>• Class 6 – a shop or other building for the sale of goods by retail or the supply of services direct to the public.</li> <li>• Class 9 – a building of a public nature.</li> <li>• Class 10 – a non habitable building or structure.</li> </ul>
<i>common area</i>	The term <i>common area</i> means an area of common property.
<i>common property</i>	The Body Corporate and Community Title Management Act 1997 defines <i>common property</i> , for a community title scheme as, effectively, freehold land forming part of the scheme land, but not forming part of a lot included in the scheme.
<i>common property water consumption</i>	The term <i>common property water consumption</i> refers to water used in common properties within a complex for irrigation, cleaning, recreation fixtures, etc. The common property water consumption for each meter read cycle will be decided by deducting the sum of consumption registered by all sub-meters from the consumption registered by the master meter. Water consumption through a <i>communal hot water system</i> is part of <i>common property water consumption</i> under this policy.
<i>communal hot water system</i>	The term <i>communal hot water system</i> refers to a common system used to supply hot water to flats, apartments, houses or units in complexes.



<i>community management statement</i>	The Body Corporate and Community Title Management Act 1997, Chapter 1 Part 4 Section 12, describes a <i>community management statement</i> as a document that a) identifies land; and b) otherwise complies with the requirements of the Act. One such requirement is to include a <i>contribution schedule</i> .
<i>community title scheme</i>	The Body Corporate and Community Title Management Act 1997 defines <i>community title scheme</i> as a single community management statement recorded by the registrar identifying land and the scheme land.
<i>complex</i>	A <i>complex</i> includes Community Titles Schemes (CTSs) and multi sole occupancy units of a class 2, 4, 5, 6, 7 or 8 building and each storey of a class 5 building.
<i>complying valve</i>	A <i>complying valve</i> is a device incorporated as part of a water meter which a Water Service Provider can use to securely restrict the flow of water, either partially or fully, to the meterable premises. This is installed upstream of the master meter or sub-meter.
<i>connectivity audit</i>	A <i>connectivity audit</i> is a verification process in which each sub-meter is matched with its respective unit. The aim of this audit is to ensure that each unit in a given complex is supplied through one sub-meter only and to make sure that the respective sub-meter is marked clearly with the number/description of that unit.
<i>contribution schedule</i>	A <i>contribution schedule</i> is an agreement between the occupants of a complex and the management of that complex. This schedule states the method of distributing the water bills for common property water consumption among occupants/owners.
<i>DualCV</i>	<i>DualCV</i> stands for Dual Check Valve, a device used to prevent back flow and thus cross contamination of potable water network.
<i>DER</i>	See <i>AMR</i> .
<i>developer</i>	A <i>developer</i> is a corporation or body of persons or even an individual, who builds a development in which the houses/units form part of a complex and can be sold to individual owners.
<i>existing development</i>	An <i>existing development</i> is any development whereby the development has a Plumbing Compliance Certificate or the Developer has lodged a request for a Plumbing Compliance Certificate prior to 1 January 2008.
<i>fixed water access charge</i>	Unitywater defines <i>fixed water access charge</i> as the charge for having your property provided with access to the reticulated or 'town' water network in your area. It covers water supply infrastructure including water mains and pipes, pumping stations, reservoirs, hydrants and any other associated infrastructure.
<i>horizontal development</i>	A <i>horizontal development</i> includes free standing units or attached units supplied through one water meter for each unit and where the meter is usually located at the boundary of the unit.
<i>lot entitlement</i>	The Body Corporate and Community Title Management Act 1997, Chapter 2 Part 5 Section 46, describes <i>lot entitlement</i> as a number allocated to the lot in the <i>contribution schedule</i> or interest schedule in the <i>community management statement</i> .
<i>management</i>	The term <i>management</i> refers to the management of complex which can be a body corporate of a community title scheme or a representative body of a multi sole occupancy unit.
<i>master meter</i>	A <i>master meter</i> is a water meter upstream of sub-meters and is used to register the bulk consumption of a multi unit complex.

<i>meterable premises</i>	The term <i>meterable premises</i> means: <ul style="list-style-type: none"> <li>• all <i>class 1</i> buildings; and</li> <li>• each lot within a <i>community title scheme</i>, including the <i>common property</i>, in a <i>water service provider's</i> area; and</li> <li>• the <i>sole occupancy unit</i> of a <i>class 2, 4, 5, 6, 7, or 8</i> building in a <i>water service provider's</i> area; and</li> <li>• each <i>storey</i> of a <i>class 5</i> building in a <i>water service provider's</i> area where the building consists of more than one <i>storey</i> and sole occupancy units are not identified at the time of the building's plumbing compliance assessment.</li> </ul>
<i>MPE</i>	The term <i>MPE</i> stands for Maximum Permissible Error which a meter is allowed to operate within.
<i>new development</i>	The term <i>new development</i> means any complex submitting a request for a Plumbing Compliance Certificate after 1 January 2008.
<i>occupant/owner</i>	The <i>occupant/owner</i> is an occupant or owner of a house, unit, flat or an apartment within a complex.
<i>pattern approval</i>	The term <i>pattern approval</i> refers to a certificate issued by the National Measurement Institute. This certificate states that a meter of certain make and model has passed a set of tests and met a set of requirements in order to be used by a service provider for trade purposes.
<i>public area</i>	The term <i>public area</i> means an area to which the public has lawful access – for example, a footpath.
<i>QPW Code</i>	The term <i>QPW Code</i> refers to the Queensland Plumbing and Wastewater Code; this code is required to be complied with under section 8B of the Standard Plumbing and Drainage Regulation 2003.
<i>sole occupancy unit</i>	The term <i>sole occupancy unit</i> , in relation to a building, means: <ol style="list-style-type: none"> <li>a room or other part of the building for occupation by one or a joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier, including, for example – <ol style="list-style-type: none"> <li>a dwelling; or</li> <li>a room or suite of associated rooms in a building classified under the Building Code of Australia as a class 2, 4, 5, 6, 7 or 8 building; or</li> </ol> </li> <li>any part of the building that is a common area or common property.</li> </ol>
<i>storey</i>	The term <i>storey</i> means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not – <ol style="list-style-type: none"> <li>a space that contains only – <ol style="list-style-type: none"> <li>a lift shaft, stairway or meter room; or</li> <li>a bathroom, shower room, laundry, water closet, or sanitary compartment; or</li> <li>accommodation intended for not more than three vehicles; or</li> <li>a combination of the above; or</li> </ol> </li> <li>a mezzanine.</li> </ol>
<i>sub-meter</i>	The term <i>sub-meter</i> is used to describe individual water meters within multi unit complexes. The term also differentiates from <i>master meter</i> that measures the supply of water to a multi unit complex as a whole.

<i>sub-metering</i>	The term <i>sub-metering</i> refers to the installation of individual water meters to measure water consumption to individual houses, units, flats or apartments that form part of a complex.
<i>unit</i>	A <i>unit</i> is a house, flat, lot of land or an apartment within a complex.
<i>vertical development</i>	The term <i>vertical development</i> includes developments of more than one storey and developments where units are supplied through meters located inside the development in a common area such as stairwell landings or beside elevator shafts.
<i>water advice notice</i>	Under section 139 of the Water Supply (Safety and Reliability) Act 2008, water service providers must give a <i>water advice notice</i> , that notifies of water consumption, to non-owner residents of residential premises, i.e. tenants. Transitional arrangements apply to the implementation if this requirement.
<i>water meter</i>	A <i>water meter</i> means a device, including equipment related to the device, for measuring the volume of water supplied to premises. An example of equipment related to the device is a pulse meter or an automatic meter reader and associated technology or similar devices.
<i>water service provider</i>	The term <i>water service provider</i> , for premises, means the persons registered under the Water Supply (Safety and Reliability) Act 2008, chapter 2, part 3, as the water service provider for retail water services for the premises.
<i>water supply</i>	The term <i>water supply</i> means the plumbing supplying water to <i>meterable premises</i> from a water service.

## 5. Policy

### 5.1 Policy Statement

Unitywater requires that all new multi-unit developments defined as *meterable premises* and drawing a water supply from Unitywater's infrastructure will be metered in accordance with this policy and the supporting technical specification.

Unitywater does not require *existing developments* to retrofit sub-meters however if the *complex management* chooses to do so then the installation must comply with this policy and the supporting technical specification.

### 5.2 Legislative Basis

The *QPW Code* is the primary tool for introduction of *sub-meters*. Part 4 of the *QPW Code* specifically deals with *water meters* for new premises. The *QPW Code* was introduced on 1 January 2008. Other reference documents are listed in Appendix 1.

### 5.3 Commencement Date

This policy commences on the date of approval of the policy (see 'Date Approved' on page one) and will apply to all *new developments* and existing *complexes* that choose to retrofit sub-meters to individual units.

### 5.4 Performance Criteria

Part 4 of the *QPW Code* provides the following performance criteria for water meters in new developments:

- the *water supply* to a *meterable premises* must be fitted with a device (*water meter*) to measure the amount of water supplied to the premises;
- a *water meter* must be located so that it is easy to read and maintain;
- a *water meter* must be properly maintained; and
- the *water meter* must include a device that allows for the restriction of the flow of water from the water service to the *water meter* (a *complying valve*).

The following Table 2, which has been extracted from the *QPW Code*, identifies the above performance criteria and acceptable solutions for sub-metering.

**Table 2 - Water Meters for new Premises (extracted from Part 4 of the QPW Code)**

	<b>Performance Criteria</b>		<b>Acceptable Solutions</b>
<b>P1</b>	The <i>water supply</i> to meterable premises must be fitted with a device ( <i>water meter</i> ) to measure the amount of water supplied to the premises.	<b>A1</b>	Each <i>water supply</i> to a <i>meterable premises</i> is to be fitted with a <i>water meter</i> which – <ul style="list-style-type: none"> <li>(a) measures only the water supplied by that <i>water supply</i> to that <i>meterable premises</i>; and</li> <li>(b) is approved by the <i>water service provider</i>; and</li> <li>(c) complies with the relevant requirements of the <i>water service provider</i> that may be imposed under the <i>Water Act 2000</i>.</li> </ul>
<b>P2</b>	A <i>water meter</i> must be located so that it is easy to read and maintain.	<b>A2</b>	The <i>water meter</i> is located – <ul style="list-style-type: none"> <li>(a) so that it can be easily maintained and read from a <i>common area, common property or public area</i>; and</li> <li>(b) it is installed –               <ul style="list-style-type: none"> <li>(i) in a <i>common area</i>; or</li> <li>(ii) in <i>common property</i>; or</li> <li>(iii) less than 3m from a property boundary within a <i>public area</i>.</li> </ul> </li> </ul>
<b>P3</b>	A <i>water meter</i> must be properly maintained.	<b>A3</b>	A <i>water meter</i> is to be maintained in accordance with the relevant Australian Standards.
<b>P4</b>	The installation of a <i>water meter</i> includes a device that allows for the restriction of the flow of water from the <i>water service</i> to the <i>water meter</i> .	<b>A4</b>	The <i>water meter</i> has a <i>complying valve</i> .

## 5.5 General Provisions

### 5.5.1 Technical Specification

The technical specification (Sub-Metering Policy – Technical Specification) has been developed for this policy to help ensure that decisions are consistent and in line with the policy intent. The technical specification may be amended from time to time. Any decision made by Unitywater in connection with a particular development takes precedence over the technical specifications.

### 5.5.2 Application and approval process

Unitywater uses a standard application and approvals process to manage the installation of *sub-meters*. This process is outlined in further detail in the Process Flow Chart of Appendix 2 and the responsibilities of Unitywater, the Local Government and the *applicant / developer* are identified.

Initially the *applicant / developer* will obtain the sub-metering requirements of Unitywater and submit drawings and other required details to Unitywater for approval. The plans shall show the approximate location of each *sub-meter* enclosure in the *complex* and the location of any

AMR panel or enclosure if provided. Arrangement drawings shall also be provided showing typical layouts for the *sub-meter* enclosures and AMR enclosure if provided.

Unitywater will consider the application and, if acceptable, issue a letter of conditional approval. The Local Government will then consider an application from the *applicant's / developer's* licensed plumber (responsible person) for a Plumbing Compliance Permit to enable work to commence.

Installation work shall not proceed until approval has been received from Unitywater and a Plumbing Compliance Permit issued by the Local Government which will include, amongst other things, conditions of approval required by Unitywater.

### **5.5.3 Meters**

Only meters approved by Unitywater can be used and a list of approved meters is provided in the technical specification. In any one development all *sub-meters* of the same size shall be of the same make and model.

### **5.5.4 Installation of meters**

The *master meter* will be supplied and installed by Unitywater at the expense of the *developer*.

The *applicant / developer* shall be responsible for the installation of *sub-meters* and the supply of all equipment and materials. Equipment, materials and installation shall be to Unitywater's specifications.

Only licensed plumbers (responsible person) are permitted to install *sub-meters*. The role of the responsible person is to contact Unitywater about the requirements for the location of the meters and the type of meter used.

All work shall be carried out in compliance with all relevant Acts, Regulations and By-Laws and Unitywater's Standard Specifications.

All *sub-meters* shall be fitted with an anti-tampering device (e.g. a seal).

### **5.5.5 Hot Water Meters**

In new developments Unitywater will not own, maintain or read hot water meters for *communal hot water systems* in a *complex*, i.e. hot water reticulated from a *complex's* central hot water service to individual units. Unitywater will however accept ownership, maintenance and reading responsibility for a sub-meter installed on the cold water inlet side of a central hot water service.

The *management* of the *complex* may choose to source, install and manage hot water meters in accordance with the Plumbing and Drainage Act 2002 and the Standard Plumbing and Drainage Regulations 2003, however the reading of water consumptions and ongoing maintenance will be the responsibility of the *complex management*.

Water consumption measured through a cold water meter on the inlet side of a *communal hot water system* is part of *common property water consumption* under this policy.

## 5.5.6 Retrofitting Sub-meters

Unitywater encourages the retrofitting of *sub-meters* to existing *complexes* provided that the installed meters are *accessible* for easy reading and maintenance. The *QPW Code*, Part 4, provides an acceptable solution to meet that condition (see Table 2 Item A2 above).

The *complex management* will need to provide evidence of a formal decision of the body corporate to pursue sub-metering of the complex as a prerequisite to Unitywater considering the application. Only an application for the entire complex managed by a single *body corporate* will be considered; piecemeal sub-metering is not acceptable.

The installation of the *sub-meters* and any *AMR* equipment is the responsibility of the *complex management* and must proceed in accordance with this policy and the requirements of Unitywater's Sub-Metering Policy – Technical Specification.

## 5.5.7 Asset Handover

### 5.5.7.1 Connectivity Audit

Prior to completion of the installation work the *applicant's / developer's* licensed plumber (responsible person) shall contact Unitywater by submitting a notification form titled 'Notice to the Water Service Provider – Installation of Sub-Meters' which is available from the Unitywater website <http://www.unitywater.com> .

Unitywater will then undertake an inspection of the *sub-meter* and any *AMR* installations and perform a *connectivity audit* to ensure that the installation has been carried out in accordance with Unitywater approval conditions and the approved hydraulic design and drawings. During the *connectivity audit* it will be verified that:

- the *sub-meters* are *accessible* for reading and maintenance;
- the serial number on each *sub-meter* matches the serial number shown on the as-constructed drawing; and
- each *sub-meter* is correctly installed and only measuring flow to the particular *unit/lot/storey* being tested. Verification shall be done by physical testing.

If the testing shows that the *sub-meter* has not been correctly installed then the *responsible person* shall investigate and remove any cross connections and mismatches, prepare new drawings and apply for another audit.

The assessment form used for the *connectivity audit*, titled 'Assessment Checklist – Sub-meters' is available from the Unitywater website <http://www.unitywater.com> .

During the *connectivity audit*, the Unitywater inspector will also record the meter reading on the master meter and each *sub-meter*.

### 5.5.7.2 As-Constructed Data

The as-constructed drawings shall show:

- *sub-meter* serial number and the description of the unit (e.g. unit number) supplied through this *sub-meter*;
- the serial number of any equipment attached to the meter;
- meter size make and model; and
- location, e.g. “one metre on the right hand side of the drive-way”.

The responsible person shall also provide the following information:

- date of completion of the installation of the meters; and
- the reading on each meter on the date of completion.

### 5.5.7.3 Plumbing Compliance Certificate

Plumbing approval for the development (a Plumbing Compliance Certificate) will not be issued by the Local Government until the responsible person provides proof of consultation with Unitywater, in the form of a copy of the Unitywater completed Assessment Checklist – Sub-meters for the development.

Payment for any water used between the time the *sub-meter* readings are recorded at or near the time of completion and the issue of the Plumbing Compliance Certificate shall be the responsibility of the *applicant / developer*.

Following the issue of a Plumbing Compliance Certificate, the Local Government will forward a copy of the Certificate to Unitywater, together with the as-constructed drawings submitted to them.

### 5.5.7.4 Acceptance of Assets

If the *connectivity audit* is successful and all documentation has been provided and in order a copy of the as-constructed drawings, the meter reading for the *master meter*, and each *sub-meter* shall be sent to designated billing system officer to link each *sub-meter* with its respective *unit/lot* in the Unitywater billing system.

Once the asset handover process has been completed the ownership of the *sub-meter* assemblies will transfer to Unitywater. The *sub-meter* assembly includes the *sub-meter* and the meter couplings; it does not include the isolation valves either side of the *sub-meter* or any AMR equipment which shall remain the responsibility of the *complex management*.

### 5.5.8 Ownership and Maintenance

Unitywater will be responsible for the maintenance, repair and replacement of any component of the *master meter* and for the reading of the *master meter*.

Unitywater will also be responsible for the maintenance, repair and replacement of any component of the *sub-meter* assemblies and also for the reading and testing of the *sub-meters*.



Unitywater will not accept ownership or the maintenance responsibility for the plumbing between the *sub-meter* assembly and the *master meter*, the plumbing downstream of the *sub-meter* assembly, the isolation valves either side of the *sub-meter* or any AMR and associated AMR infrastructure installed at the *complex*; this infrastructure remains the responsibility of the *complex management*.

Unitywater may at any reasonable time conduct either in-situ testing or take a proportion of *sub-meters* for laboratory testing at Unitywater's expense. The objective of this testing is to ensure that the meters are working within the Maximum Permissible Error (*MPE*) over different flow rates. Unitywater will advise the *body corporate* in advance of any expected interruptions in supply due to maintenance work and it will be the *body corporate* responsibility to advise the *occupants*.

Based on the testing results, Unitywater may conduct further testing on other sample(s) of meters, test all the *sub-meters*, replace some or all the *sub-meters*, or leave the existing *sub-meters* if found operating within the *MPE* over different flow rates.

Unitywater may also elect to replace *sub-meters* at any reasonable time at no charge. The *management* of the *complex* will be advised prior to the replacement.

### 5.5.9 Billing

Unitywater will bill owners for the water supplied through each *sub-meter*. Furthermore where legislation requires, non-owner residents or *occupants* shall receive a *water advice notice* based on the *sub-meter* reading data.

Any *common property water consumption* (the difference between the bulk consumption registered by the *master meter* and the sum of individual consumption registered by the *sub-meters*) will be billed under two different systems depending on geographical location. *Common property water consumption* in the southern region of Unitywater will be billed to individual unit owners by *lot entitlement* in accordance with the *contribution schedule* provided by the *body corporate* whereas *common property water consumption* in the northern region of Unitywater will be billed to the *management* of the *complex*. Water consumption through a *communal hot water system* is part of *common property water consumption* under this policy.

Individual *units* within a *complex* will attract the appropriate *fixed water access charge* however the *master meter* will not attract any additional *fixed water access charge*.

When a *sub-meter* stops operating or a reading cannot be obtained, then Unitywater will bill the individual property owners based on the average water consumption during a similar corresponding period until the situation is rectified. It is the responsibility of Unitywater to replace the stopped *sub-meter*.

Unitywater may charge a service fee for inspecting and checking the performance of *sub-meters* if requested to do so by individual *owners* or *managers* of *complexes*, and where it is found that the *sub-meter* is reading within the specified accuracy range the service fee will be forfeited to Unitywater.

In the case of a *complex* that is not individually metered by *sub-meters* Unitywater will apportion the *master meter* consumption and bill the individual *owners* based on the *lot entitlement* specified in the *community management statement* for the *complex*. The *community management statement* is a requirement of the Body Corporate and Community Management Act 1997.

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## APPENDIX 1 – Reference Documents

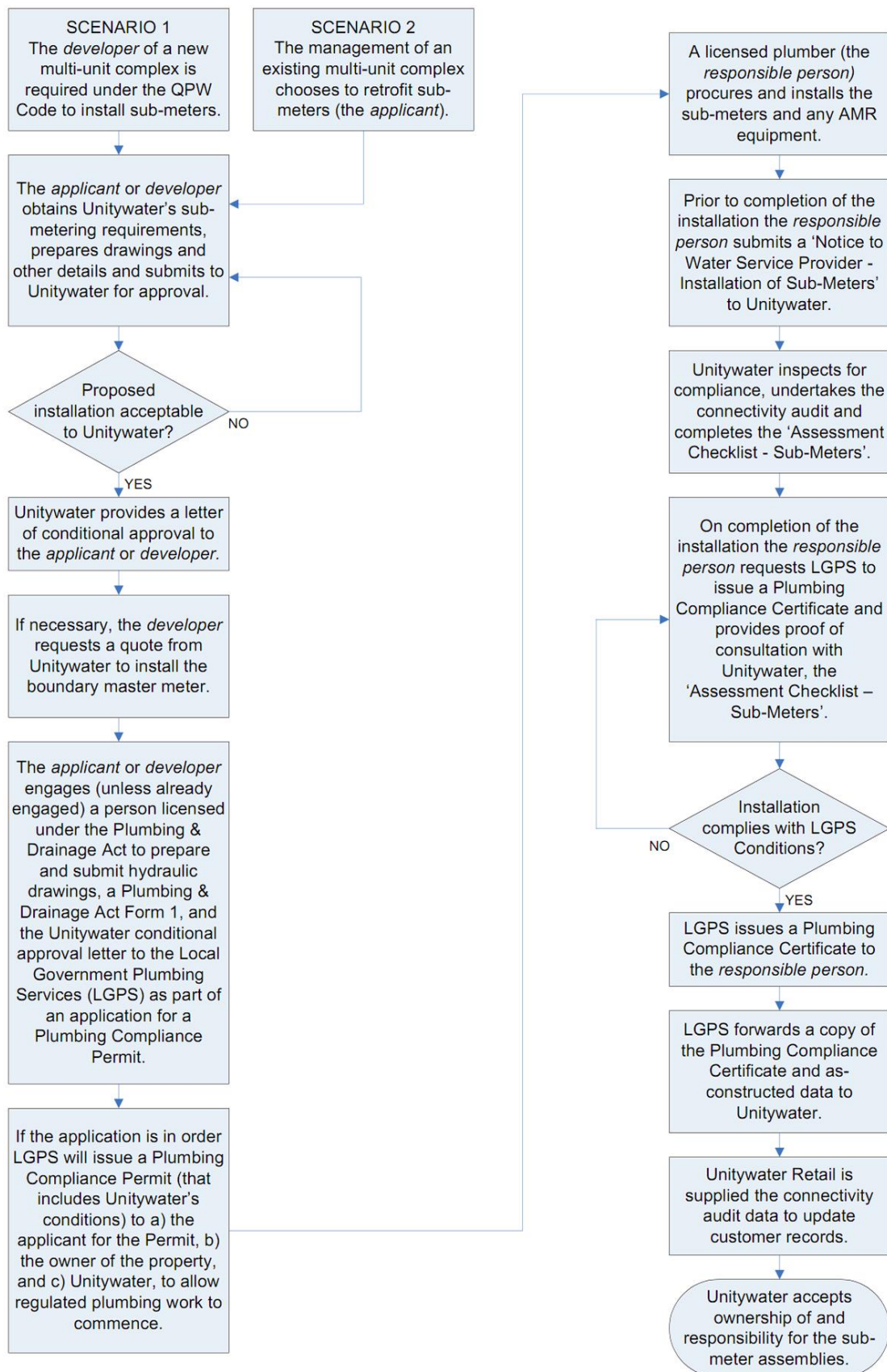
### Relevant Policies and Legislation

- Water Act 2000.
- Water Regulation 2002
- Water Supply (Safety and Reliability) Act 2008.
- Building Act 1975
- Building Regulation 2006
- Integrated Planning Act 1997
- Plumbing and Drainage Act 2002
- Queensland Plumbing and Wastewater Code
- Standard Plumbing and Drainage Regulations 2003
- Public Health Act 2005
- Water Efficiency Labelling and Standards Act 2005
- Building Code Australia
- Plumbing Code of Australia
- Australian and New Zealand Design Standards
- Australian Technical Specifications
- Body Corporate and Community Management Act 1997

### Related documents

- AS 3565.1:2010 Meters for Cold and Heated Drinking and Non-drinking Water Supplies
- AS/NZS 3500.1
- AS 2419.1-2005 Fire Hydrant Installations – System Design, Installation and Commissioning

## APPENDIX 2 – Process Flow Chart





# Sub-Metering Policy Technical Specification

Policy Number	INS0005
Policy Sponsor	Chief Operating Officer
Policy Manager	Strategic Asset Management Manager
Date Approved	8/4/2011
Date Last Reviewed	n/a
Related Documents	Sub-Metering Policy

## 1. Introduction

Prior to the introduction of the new Queensland Plumbing and Wastewater Code (*QPW code*) on 1 January 2008 it was not mandatory to install *water meters* within multi-unit residential premises and commercial premises. This meant that in most circumstances individual lot owners had no knowledge of their individual water use and consequently may have been discouraged in their attempts to reduce their individual consumption. As from 1 January 2008 it is mandatory to install *sub-meters* in all new multi-unit developments and some non-residential premises. This will enable *water service providers* to directly charge the owners of separate lots in new buildings for their actual water consumption.

## 2. Purpose

The purpose of the technical specification is to help ensure that any decisions in respect to *sub-metering* are consistent and in line with the intent of the Unitywater Sub-Metering Policy. The technical specification may be amended from time to time. Any decision made by Unitywater in connection with a particular development takes precedence over the technical specifications.

*Sub-meters* installed to these specifications shall become the property of Unitywater. Where legislation requires, property *owners* shall be billed from these *sub-meters* and *occupants* shall receive a *water advice notice*.

### 3. Definitions

**Table 1 – Terms used throughout the technical specification with corresponding meanings**

<b>Term</b>	<b>Meaning</b>
<i>AMR</i>	The term <i>AMR</i> means Automatic Meter Reading and also includes Digital Electronic Readouts ( <i>DER</i> ) such as a display panel that can be scrolled through to read the respective sub-meter consumption.
<i>accessible</i>	The term <i>accessible</i> for water meter reading, maintenance and/or replacement purposes, means accessible within reasonable time (between 8 am-5 pm), with the sub-meters being located in a non-locked enclosure requiring a non-key access (PIN code), and not being obstructed by vehicles or other plant or equipment or vegetation.
<i>applicant</i>	An <i>applicant</i> is the Body Corporate of an existing <i>complex</i> that has made the decision to retrofit sub-meters to ALL lots within the <i>complex</i> .
<i>body corporate</i>	The term <i>body corporate</i> refers to a corporation or body of persons or even an individual, with a legal existence distinct from the individual person(s) making up the corporate entity. The purpose of the body corporate is to manage common property.
<i>boundary</i>	<i>boundary</i> means the area between the property external walls and pathways, streets or fence.
<i>building classes 1 to 10</i>	Building classifications as defined by the Building Code of Australia – Classification of Buildings. Some common classes being: <ul style="list-style-type: none"> <li>• Class 1a – detached dwelling or an attached dwelling separated by a fire-resisting wall.</li> <li>• Class 2 – a building containing more than 2 or more sole-occupancy units each being a separate dwelling.</li> <li>• Class 5 – an office building used for commercial purposes.</li> <li>• Class 6 – a shop or other building for the sale of goods by retail or the supply of services direct to the public.</li> <li>• Class 9 – a building of a public nature.</li> <li>• Class 10 – a non habitable building or structure.</li> </ul>
<i>common area</i>	The term <i>common area</i> means an area of common property.
<i>common property</i>	The Body Corporate and Community Title Management Act 1997 defines <i>common property</i> , for a community title scheme as, effectively, freehold land forming part of the scheme land, but not forming part of a lot included in the scheme.
<i>common property water consumption</i>	The term <i>common property water consumption</i> refers to water used in common properties within a complex for irrigation, cleaning, recreation fixtures, etc. The common property water consumption for each meter read cycle will be decided by deducting the sum of consumption registered by all sub-meters from the consumption registered by the master meter. Water consumption through a <i>communal hot water system</i> is part of <i>common property water consumption</i> under this policy.
<i>communal hot water system</i>	The term <i>communal hot water system</i> refers to a common system used to supply hot water to flats, apartments, houses or units in complexes.
<i>community management statement</i>	The Body Corporate and Community Title Management Act 1997, Chapter 1 Part 4 Section 12, describes a <i>community management statement</i> as a document that a) identifies land; and b) otherwise complies with the requirements of the Act. One such requirement is to include a <i>contribution schedule</i> .

<i>community title scheme</i>	The Body Corporate and Community Title Management Act 1997 defines <i>community title scheme</i> as a single community management statement recorded by the registrar identifying land and the scheme land.
<i>complex</i>	A <i>complex</i> includes Community Titles Schemes (CTSs) and multi sole occupancy units of a class 2, 4, 5, 6, 7 or 8 building and each storey of a class 5 building.
<i>complying valve</i>	A <i>complying valve</i> is a device incorporated as part of a water meter which a Water Service Provider can use to securely restrict the flow of water, either partially or fully, to the meterable premises. This is installed upstream of the master meter or sub-meter.
<i>connectivity audit</i>	A <i>connectivity audit</i> is a verification process in which each sub-meter is matched with its respective unit. The aim of this audit is to ensure that each unit in a given complex is supplied through one sub-meter only and to make sure that the respective sub-meter is marked clearly with the number/description of that unit.
<i>contribution schedule</i>	A <i>contribution schedule</i> is an agreement between the occupants of a complex and the management of that complex. This schedule states the method of distributing the water bills for common property water consumption among occupants/owners.
<i>DualCV</i>	<i>DualCV</i> stands for Dual Check Valve, a device used to prevent back flow and thus cross contamination of potable water network.
<i>DER</i>	See <i>AMR</i> .
<i>developer</i>	A <i>developer</i> is a corporation or body of persons or even an individual, who builds a development in which the houses/units form part of a complex and can be sold to individual owners.
<i>existing development</i>	An <i>existing development</i> is any development whereby the development has a Plumbing Compliance Certificate or the Developer has lodged a request for a Plumbing Compliance Certificate prior to 1 January 2008.
<i>fixed water access charge</i>	Unitywater defines <i>fixed water access charge</i> as the charge for having your property provided with access to the reticulated or 'town' water network in your area. It covers water supply infrastructure including water mains and pipes, pumping stations, reservoirs, hydrants and any other associated infrastructure.
<i>horizontal development</i>	A <i>horizontal development</i> includes free standing units or attached units supplied through one water meter for each unit and where the meter is usually located at the boundary of the unit.
<i>lot entitlement</i>	The Body Corporate and Community Title Management Act 1997, Chapter 2 Part 5 Section 46, describes <i>lot entitlement</i> as a number allocated to the lot in the <i>contribution schedule</i> or interest schedule in the <i>community management statement</i> .
<i>management</i>	The term <i>management</i> refers to the management of complex which can be a body corporate of a community title scheme or a representative body of a multi sole occupancy unit.
<i>master meter</i>	A <i>master meter</i> is a water meter upstream of sub-meters and is used to register the bulk consumption of a multi unit complex.
<i>meterable premises</i>	The term <i>meterable premises</i> means: <ul style="list-style-type: none"> <li>• all <i>class 1</i> buildings; and</li> <li>• each lot within a <i>community title scheme</i>, including the <i>common property</i>, in a <i>water service provider's</i> area; and</li> <li>• the <i>sole occupancy unit</i> of a <i>class 2,4,5,6,7, or 8</i> building in a <i>water service provider's</i> area; and</li> </ul>

	<ul style="list-style-type: none"> <li>each <i>storey</i> of a <i>class 5</i> building in a <i>water service provider's</i> area where the building consists of more than one <i>storey</i> and sole occupancy units are not identified at the time of the building's plumbing compliance assessment.</li> </ul>
<i>MPE</i>	The term <i>MPE</i> stands for Maximum Permissible Error which a meter is allowed to operate within.
<i>new development</i>	The term <i>new development</i> means any complex submitting a request for a Plumbing Compliance Certificate after 1 January 2008.
<i>occupant/owner</i>	The <i>occupant/owner</i> is an occupant or owner of a house, unit, flat or an apartment within a complex.
<i>pattern approval</i>	The term <i>pattern approval</i> refers to a certificate issued by the National Measurement Institute. This certificate states that a meter of certain make and model has passed a set of tests and met a set of requirements in order to be used by a service provider for trade purposes.
<i>public area</i>	The term <i>public area</i> means an area to which the public has lawful access – for example, a footpath.
<i>QPW Code</i>	The term <i>QPW Code</i> refers to the Queensland Plumbing and Wastewater Code; this code is required to be complied with under section 8B of the Standard Plumbing and Drainage Regulation 2003.
<i>sole occupancy unit</i>	The term <i>sole occupancy unit</i> , in relation to a building, means: <ul style="list-style-type: none"> <li>a) a room or other part of the building for occupation by one or a joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier, including, for example – <ul style="list-style-type: none"> <li>i. a dwelling; or</li> <li>ii. a room or suite of associated rooms in a building classified under the Building Code of Australia as a class 2, 4, 5, 6, 7 or 8 building; or</li> </ul> </li> <li>b) any part of the building that is a common area or common property.</li> </ul>
<i>storey</i>	The term <i>storey</i> means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not – <ul style="list-style-type: none"> <li>a) a space that contains only – <ul style="list-style-type: none"> <li>i. a lift shaft, stairway or meter room; or</li> <li>ii. a bathroom, shower room, laundry, water closet, or sanitary compartment; or</li> <li>iii. accommodation intended for not more than three vehicles; or</li> <li>iv. a combination of the above; or</li> </ul> </li> <li>b) a mezzanine.</li> </ul>
<i>sub-meter</i>	The term <i>sub-meter</i> is used to describe individual water meters within multi unit complexes. The term also differentiates from <i>master meter</i> that measures the supply of water to a multi unit complex as a whole.
<i>sub-metering</i>	The term <i>sub-metering</i> refers to the installation of individual water meters to measure water consumption to individual houses, units, flats or apartments that form part of a complex.
<i>unit</i>	A <i>unit</i> is a house, flat, lot of land or an apartment within a complex.
<i>vertical development</i>	The term <i>vertical development</i> includes developments of more than one storey and developments where units are supplied through meters located inside the development in a common area such as stairwell landings or beside elevator shafts.
<i>water advice notice</i>	Under section 139 of the Water Supply (Safety and Reliability) Act 2008, water service providers must give a <i>water advice notice</i> , that notifies of water consumption, to non-owner residents of residential



	premises, i.e. tenants. Transitional arrangements apply to the implementation if this requirement.
<i>water meter</i>	A <i>water meter</i> means a device, including equipment related to the device, for measuring the volume of water supplied to premises. An example of equipment related to the device is a pulse meter or an automatic meter reader and associated technology or similar devices.
<i>water service provider</i>	The term <i>water service provider</i> , for premises, means the persons registered under the Water Supply (Safety and Reliability) Act 2008, chapter 2, part 3, as the water service provider for retail water services for the premises.
<i>water supply</i>	The term <i>water supply</i> means the plumbing supplying water to <i>meterable premises</i> from a water service.

## 4. Master Meter

It shall continue to be a requirement to install a *master meter* at the *boundary* of a development and Unitywater will install an approved *master meter* upon application from the *developer*.

The only exception to this is where Unitywater has given approval for each lot to have an independent water service connected to Unitywater's water main and there is no common property usage.

## 5. Sub-meter

All *sub-meters* shall be *pattern approved* by the National Measurement Institute (NMI). A table listing all the *pattern approved* meters that are approved for use by Unitywater up to the date of issuing this technical specification is included in Appendix 1.

The size of all *sub-meters* in a *complex* shall be determined by hydraulic analysis. Generally 20 mm *sub-meters* shall be used however if larger sizes are required this will require the approval of Unitywater.

All *sub-meters* shall have a unique serial number stamped on them.

The applicant / developer will supply the *sub-meters* under the following conditions:

- the chosen meter is one of the meters listed in the table in Appendix 1;
- Unitywater approves the chosen meter; and
- all *sub-meters* of the same size installed in a complex are the same make and model.

All *sub-meters* shall have integral dual check valves (*DualCV*). However this requirement does not remove any obligation of the *applicant / developer* to undertake a backflow hazard assessment of the *complex*.

*Sub-meters* shall be installed with isolation valves on each side of the meter together with an adjustable meter coupling on one side of the meter and a standard meter coupling on the other side of the meter to enable safe removal of the meter. The upstream isolation valve must be a *complying valve*, as defined in the *QPW Code*. The *sub-meter* and the meter couplings are referred to as the sub-meter assembly.

## 5.1 Sub-meter Installation

All *sub-meters* shall be installed in accordance with any conditions imposed by their *pattern approval certificate*.

If the *sub-meter* is to be installed in any orientation other than horizontal orientation, the meter must be capable of operation in the vertical or other angular alignment without performance degradation and that capability must be referenced in the *pattern approval certificate*.

### 5.1.1 Installation without AMR

Where possible *sub-meters* shall be grouped together and they must be installed at ground level in an *accessible area* in the *common area*, in *common property* or in a *public area*. If located in a *public area* they must be installed within three metres of the property *boundary* and preferably within the footpath to facilitate direct reading, testing and replacement.

All *sub-meters* shall be installed in a location that must be unrestricted at all times, including:

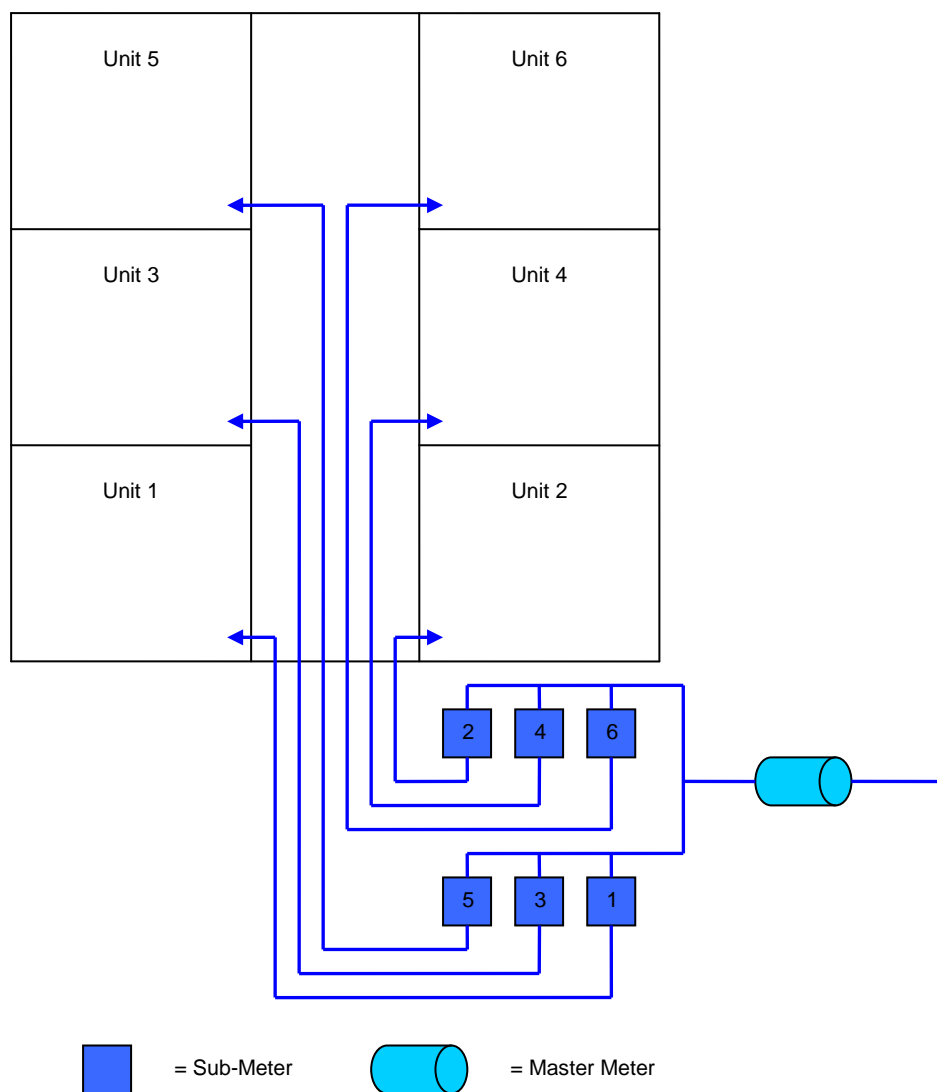
- keyless access;
- free from *complex* security systems;
- no obstruction or hazards from vehicular movements; and
- free from vegetation and other forms of obstructions and hazards.

This type of installation does not require *AMR* technology as the *sub-meters* can be manually read in the usual process of meter reading.

This installation option is most suitable for *horizontal developments* which include free standing units or attached units supplied through one water meter for each unit and where the meter is usually located at or near the front property *boundary* of the unit.

It is envisaged, but not mandatory, that this installation option may be the most suitable solution for *horizontal developments* or *vertical developments* up to three *storeys* in height.

In buildings up to and including three *storeys* and where the hydraulic analysis of the plumbing shows an acceptable level of pressure loss, *sub-meters* shall be installed in a weather resistant *sub-meter* cabinet located at an accessible side of the building or in a cabinet in a *common area* (stairwell landing, beside the elevator shaft, etc) on the ground floor (refer Figure 1). Alternatively, Unitywater may approve installation of the *sub-meters* in a meter box below ground subject to the meter box being of sufficient size and being easily accessible.



**Figure 1 - A Schematic Elevation of a Limited High Rise Development**

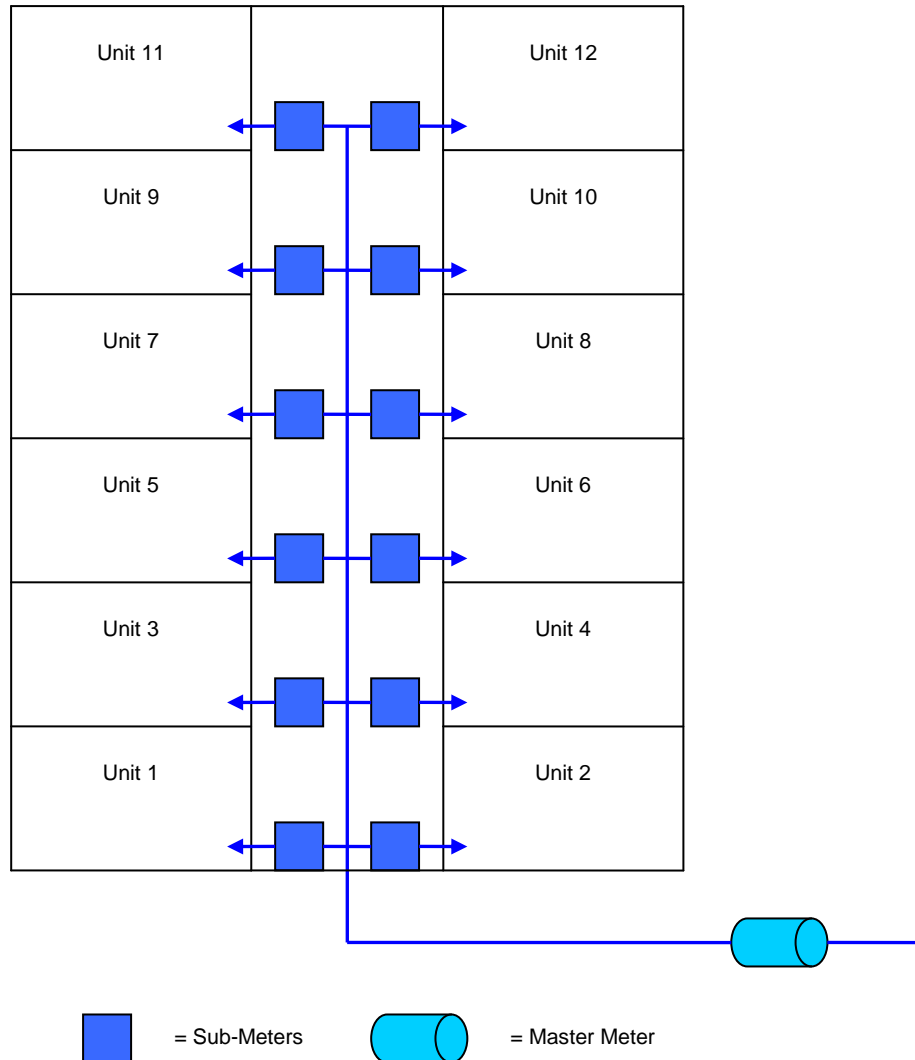
See also the following sections relating to Sub-meter Enclosures for further details.

### 5.1.2 Installation with approved AMR technology

In certain installations it will be necessary to utilise an approved *AMR* system to facilitate reading of the *sub-meters*. This necessity may be due to the impracticality of installing all *sub-meters* at ground level (e.g. high rise buildings), or where access to any of the *sub-meters* is restricted in any way (e.g. gated communities).

In the case of a gated community an acceptable solution to maintain *accessible sub-meters* and any *AMR* may be the installation of a pedestrian gate that is fitted with a Unitywater lock. Alternative access options may be considered if the *applicant / developer* can demonstrate that the option provides for *accessible sub-meters* and *AMR*.

In high rises of more than three storeys, *sub-meters* may be installed in common areas such as stairwell landings or beside the elevator shaft (refer Figure 2) on each floor. For each floor the respective sub-meters shall be grouped in a hinged cabinet (or cupboard). Alternatively, more than one cabinet can be used for each floor.



**Figure 2 – A Schematic Elevation of a High Rise Development**

See also the following section relating to Sub-meter Enclosures for further details.

### 5.1.3 Sub-meter Enclosures

*Sub-meters* may be installed in cabinets or standard meter boxes. Whatever form the enclosure takes, the *sub-meters* shall be *accessible* and the dial face of the *sub-meters* located such that it can be easily read by one unassisted person without the need for ladders or other access provisions. Unitywater may withhold the approval if the location and enclosure is considered unsuitable.

Cabinets shall completely house the *sub-meters* including the isolation valves and *sub-meters*. The cabinets shall be hinged to enable opening by hand. The base of the cabinet

shall be a maximum 1.2 m above floor level and the top of the cabinet should be a maximum of 2.0m above floor level. The cabinet shall have a minimum depth of 150 mm and a minimum length of 700 mm and must be of sufficient dimensions to facilitate *sub-meter* maintenance and replacement. The spacing between adjacent service pipes shall be at least 150 mm centre to centre and the space between the outside pipes and the cabinet wall shall be a minimum of 100mm. The cabinet shall be designed to minimise the likelihood of injury to people walking past the cabinet. There shall be sufficient room for cabinet door(s) to swing open completely and be held open. All enclosures are to be drained to either the stormwater system or the sewerage system in a manner that prevents any seepage water causing damage to buildings and other infrastructure. A typical *sub-meter* installation is displayed in the following photograph:



Cabinets are to be fitted with a latch and provision for a padlock.

If the cabinet also houses fire hose reels or gas meters, the fire and safety rating shall not be compromised.

The cabinet must not be classifiable as a confined space for entry purposes.

A minimum of two square metres shall be made available in front of the cabinet as free working space. Adequate lighting shall be provided to enable meter reading at all times of the day or night.

All *sub-meter* cabinets, whether housing single or multiple *sub-meters*, must be identified on the outside with the words "Water Sub-meter" or "Water Sub-meters" respectively in readable and permanent print.

## 5.1.4 Other Requirements

### a) Sub-meter identification

The *sub-meters* and any digital electronic readouts (*DER*) that are installed as part of an *AMR* system must be permanently identified with the unit number (as displayed on the unit door) that they serve.

### b) As-constructed drawings

The hydraulic as-constructed drawings for the development must include a table detailing:

- *sub-meter* serial numbers and the description of the unit (e.g. unit number) supplied through each *sub-meter* ;
- the serial number of any equipment attached to the meter;
- meter size, make and model; and
- location, e.g. “one metre on the right hand side of the drive-way”.

The *applicant's / developer's* licensed plumber (responsible person) shall also provide the following information:

- date of completion of the installation of the meters; and
- the reading on each meter on the date of completion

### c) Connectivity Audit

Just prior to the completion of the installation work the responsible person shall contact Unitywater and request a *connectivity audit*. This *connectivity audit* ensures that each *unit/lot/storey* in the *complex* is fed through an individual *sub-meter* for that *unit/lot/storey* only and that this meter matches the description in the submitted drawings which shall be submitted with the request.

Unitywater will conduct the *connectivity audit* and make sure that the installation has been done in accordance with the Unitywater approval conditions and the approved hydraulic design and drawings.

## 5.2 Automatic Meter Reading

Where *sub-meters* cannot be installed in an *accessible* part of the development or *complex*, *AMR* technology is required. The installation of an *AMR* system does not alleviate the requirement for *sub-meters* to be installed in an *accessible* area in the *common area*, in *common property* or in a *public area*.

Optionally, an *applicant / developer* may also voluntarily choose to install an *AMR* system on *accessible sub-meters*.

If the *applicant / developer* wishes to use an *AMR* system, the *applicant / developer* shall forward a request in writing to Unitywater seeking permission to use such a system.

The *applicant / developer* shall only use the *AMR* system approved by Unitywater.

Unitywater has authorised the use of a number of *AMR* systems, incorporating both hardwired and radio technology; it is expected that *applicant / developers* will select the most appropriate system for the development. The table in Appendix 2 lists those authorised *AMR* systems.

### 5.2.1 Technical Requirements

The *AMR* system shall incorporate preferably only one *DER* panel which shall be located in an *accessible* location. The location requirements for the *DER* are the same as specified for *sub-meter* enclosures.

When an *AMR* system is used all *sub-meters* and the *master meter* must be linked to enable the meter reading data to be sent to the *DER* panel.

The *DER* panel enclosure shall be weatherproof if located external to the building and shall be provided with a 240 volt power supply for the use of Unitywater together with a conduit and draw wire back to the telecommunications supply pit to facilitate future remote interrogation of the *AMR*. The enclosure shall have an extra volume allowance of 300mm x 200mm x 150mm deep after all equipment is installed to enable the installation of a modem for remote access to the *AMR*.

### 5.2.2 Installation Requirements

A qualified technician approved by the *AMR* provider must install each component of the *AMR* system and work must be carried out to a recognised standard; e.g. the relevant Australian Standard.

The installation of the *AMR* does not remove the need to be able to manually read each *sub-meter*.

The *AMR* and the *sub-meter* itself must be separable items. Even if they are supplied by the same manufacturer, allowance must be made for the replacement of either component with a similar product of a different brand without the need to replace the both components. This separation and replacement must be able to be performed in the field, without sending equipment away from site.

Before the final Plumbing Compliance Certificate is issued by Local Government, the *AMR* system must be fully commissioned and proven to be working by providing accurate reads from all *sub-meters* in the *complex*. This shall take place as part of the *connectivity audit*.

A full set of hydraulic and electrical as-constructed drawings must be submitted to the Local Government Plumbing Services for forwarding to Unitywater.

### 5.2.3 Electrical Requirements

The electrical installation of the *AMR* and connection to *sub-meters* shall be in accordance with:

- AS3000, AS3008 and all relevant Australian Standards;
- Supply authority regulations; and
- The requirements of all relevant statutes.

Specific Unitywater requirements include:

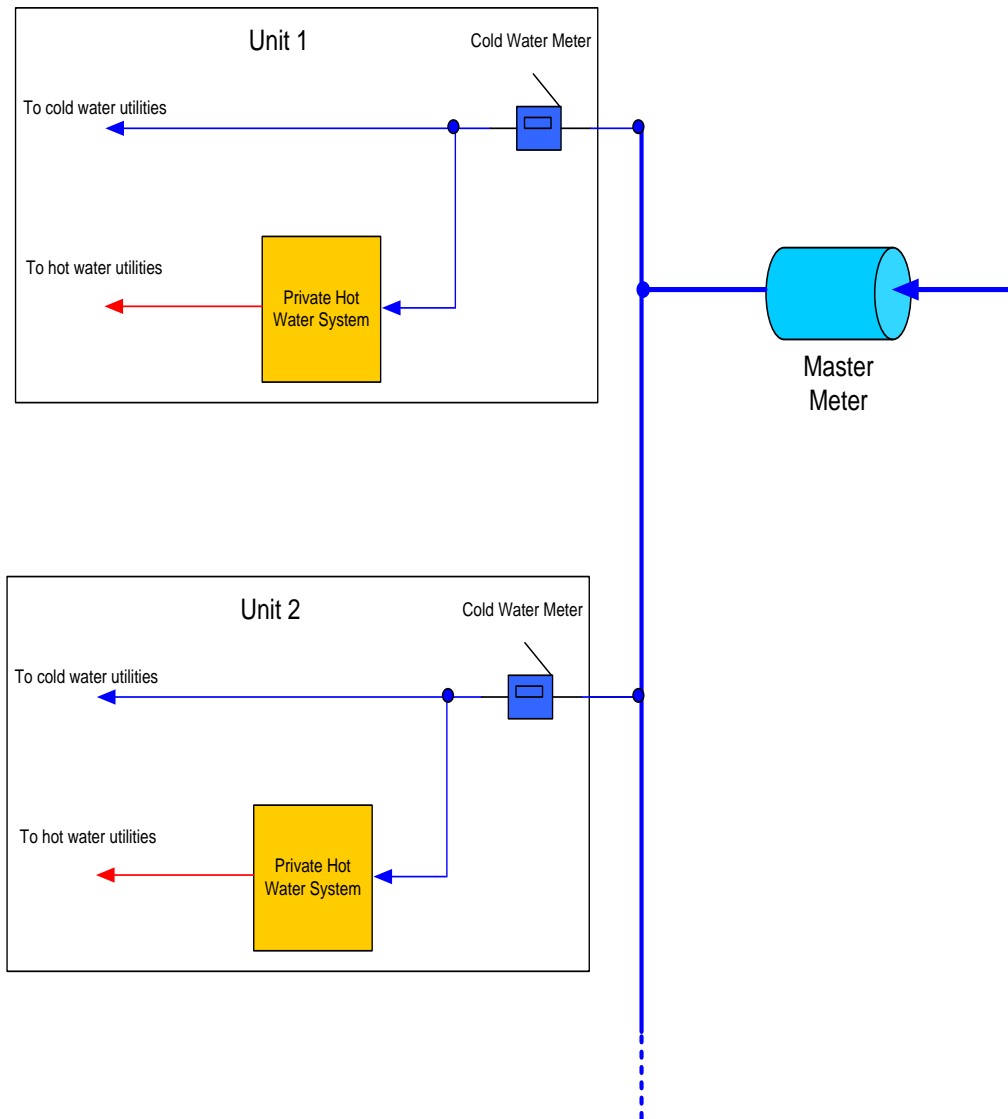
- The cable used to connect the *AMR* to each *sub-meter* pulsed output shall be 4-core shielded multi stranded instrument cable - 2 pair conductor 0.5mm<sup>2</sup> (7/0.30mm) screened.
- All cable terminations shall be soldered or gel filled crimp type connectors.
- All cables shall be clearly identified with the unit number to which the meter is connected.
- All cables shall be terminated and tested by the installer for continuity and that the correct *sub-meter* is terminated to the correct input at the *AMR*. No conduit or cabling entries are to be installed on the top or sides of the *AMR* enclosure (cubicle). Only bottom entry is permissible.
- The installer shall provide a dedicated 240-volt power circuit to the *AMR* via a lockable switch on the main electrical distribution board.
- The cubicle will incorporate a main switch for isolation of all power sources in the installation for safe de-energised servicing.
- All cubicles will incorporate one switched double socket power outlet connected to the dedicated *AMR* power circuit.
- All equipment in the cubicle shall be identified by Traffolyte labels screw fixed to the cubicle.
- A cubicle source supply isolation procedure identifying locations of the main circuit breaker shall be completed and secured to the inside of the cubicle door.
- Floating connections in the cubicle are not permitted and fixed terminals shall be used for additional connections where required.
- All 240v cabling shall maintain their double insulation for the entire length inside the cubicle until their entry into the circuit breaker section.
- All cables entering or leaving cubicles shall be labelled at both ends with PVC numbers and carriers.
- Cabling to all instruments shall be via screened instrument cable. Earth screen/tracer wires to be connected at the source end only so as to not create earth loop disturbances. Where practical the screen shall be sleeved with clear tubing and terminated with a crimp lug.
- All cables passing through the gland plate shall be fitted with approved nylon compression glands to exclude any vermin or foreign fumes entering the cubicle.
- All wires shall be terminated using proprietary type insulated bootlace pins. All crimp lugs must be crimped using correct crimping tools.
- All consumer mains and electric power cables shall be continuous to and from the cubicle and all cable conductors will be stranded type. No joins shall be permitted underground.
- All conduit sizes are to be oversized by 30% to allow for future expansion.
- All conduit exposed to public access shall be UV stabilised and protected from mechanical damage by an additional covering to a height of 1200mm, manufactured from 3mm marine grade aluminium.



### 5.3 Hot Water Systems

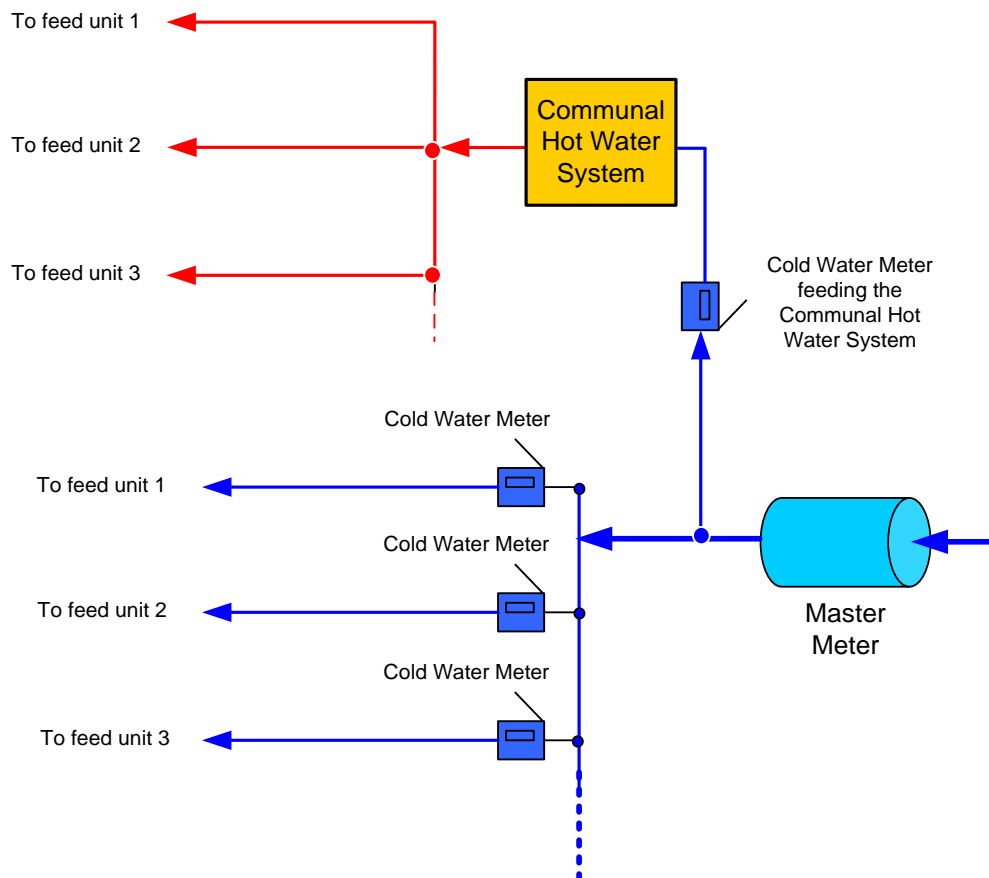
*Sub-metering* for hot water systems may be provided if required. Listed below are the different configurations supported by Unitywater. Unitywater’s billing approach is outlined for each configuration.

Individual hot water systems inside the units - In each unit the hot water system is supplied through the cold water sub-meter (refer Figure 3). In this case the hot water consumption is a proportion of the cold water consumption which will be billed to the respective unit.



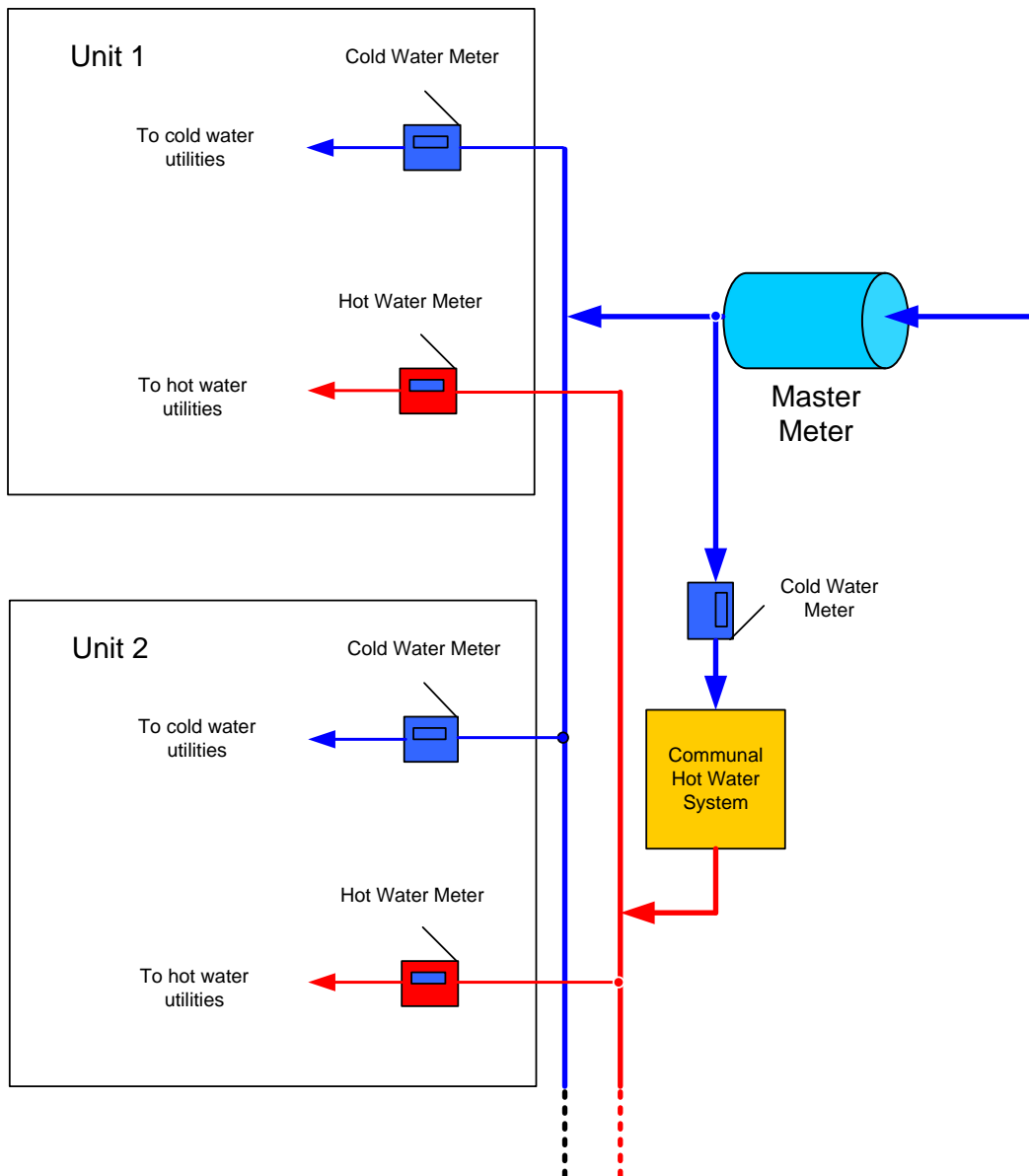
**Figure 3 - Individual Hot Water System arrangement**

**Communal Hot Water System** - Communal hot water systems can be considered as *common property* water consumption and shall be fitted accordingly with an upstream cold water sub-meter (refer Figure 4). For this alternative Unitywater will bill the total water consumption used by the *communal hot water system* in the *complex* as though it is *common property water consumption*, i.e. it will be billed under two different systems depending on geographical location. *Common property water consumption* in the southern region of Unitywater will be billed to individual unit owners by *lot entitlement* in accordance with the *contribution schedule* provided by the *body corporate* whereas *common property water consumption* in the northern region of Unitywater will be billed to the *management of the complex*.



**Figure 4 – Communal Hot Water System (one meter)**

Alternatively, the *management of the complex* may install *sub-meters* to measure hot water consumption for each unit and apportioning the costs to the occupants accordingly. The *management of the complex* will be responsible for reading the *sub-meters* and apportioning costs. This system does not negate the need for a *sub-meter* on the cold water inlet to the *communal hot water system* and it is schematically represented in Figure 5.



**Figure 5 – Sub-metering for Hot Water Service within units**

It is to be noted that Unitywater will not take ownership of any new hot water meters and as such it is not responsible for their accuracy, maintenance and/or replacement.

## 5.4 Asset Handover to Unitywater

The accuracy of the connectivity of the *sub-meters* and any *AMR* system will be verified during the *connectivity audit* identified in sections 5.1.4 c) and 5.2.2.

Once the final Plumbing Compliance Certificate has been issued by Local Government, the ownership of the sub-meter assemblies transfer to Unitywater. The ownership and maintenance of the isolation valves and any *AMR* infrastructure remains the responsibility of the *complex management*.

## 6. COPYRIGHT

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## 7. CONFIDENTIALITY

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## APPENDIX 1 - National Measurement Institute Pattern Approved water meters approved by Unitywater

<u>Make</u>	<u>Pattern Approval #</u>	<u>Model</u>	<u>Type</u>	<u>Size</u>	<u>Orientation</u>	<u>Dual Check Valves</u>
Elster	14 / 3 / 1	V100	Positive Displacement	20mm	Any	Integral
Actaris	14 / 3 / 3	CT5	Positive Displacement	20mm	Any	Integral
Reliance	14 / 3 / 4	Endurance	Multijet Turbine	20mm	Horizontal ONLY	Integral
Reliance	14 / 3 / 9	Bullet	Positive Displacement	20mm	Any	Integral

## APPENDIX 2 - Authorised AMR Systems

<u>Supplier</u>	<u>Communication Technology</u>
Enware Pty Ltd	Radio (with wiring as appropriate)
Epitomy Pty Ltd	Hardwired
Meter Technology Australia Pty Ltd	Radio
UDS Pty Ltd	Hardwired
UDS Pty Ltd	Radio
Utility Technology Pty Ltd	Hardwired



Unitywater

ABN: 89 791 717 472

# Notice to the water service provider Installation of sub-meters

**Postal Address**  
PO Box 953  
Caboolture QLD 4510

**Unitywater Unit**  
Ph: 07 5431 8333  
Fax: 07 5431 8288

**Internet**  
[www.unitywater.com](http://www.unitywater.com)  
[development.services@unitywater.com](mailto:development.services@unitywater.com)

**Water Service Provider:**

Unitywater  
PO Box 953, Caboolture Qld 4510

**Owner of the premises:**

Name: \_\_\_\_\_  
*(Name in full. Attach list if necessary)*

Postal address: \_\_\_\_\_  
\_\_\_\_\_

**Description of land:**

Street address: \_\_\_\_\_  
*(Include no, street, suburb/locality and postcode)*

Real property description Lot: \_\_\_\_\_ Plan: \_\_\_\_\_  
*(Attach list if necessary)*  
Local Government Area: \_\_\_\_\_

**Related approvals:**

Development application no: \_\_\_\_\_  
Compliance permit/other: \_\_\_\_\_

**Notification to the Water Service Provider**

The water service provider must be notified (under section 54A of Standard Plumbing and Drainage Regulation 2003 (SPDR) when the sub meters are proposed to be installed.

	Yes	No
Location of water meters identified on plan		
Site plan approved by Council/Water service provider		
Proof of consultation with the water service provider (e.g. letter or certificate)		

**Total number of sub meters to be installed:**

Town houses		Multi storey office block	
Multi storey unit		Shopping complex	
Other (please specify)			
_____			
_____			
_____			

**Location of sub meter**

No	Shop/Tenancy No (if applicable)	Storey/Level (if applicable)	Other

Each form can include up to 15 sub-meters. For the next 15 sub-meters, another form to be filled out and attached.

**Additional information of the installation (if required)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Responsible person:**

Under section (54A of the SPDR) the responsible person for the work must, at least 2 business days before the cladding or lining covering the plumbing work is fixed, give the water service provider for the area in which the work is being performed written notice that the sub-meters are proposed to be installed.

The responsible person for regulated work is a person who is licensed to perform the work and either performs or directs the performance of the work.

Name: \_\_\_\_\_

Postal address: \_\_\_\_\_

Plumbers licence no: \_\_\_\_\_ Other Licence/Registration no: \_\_\_\_\_

Daytime contact number: \_\_\_\_\_ Mobile number: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Privacy statement**

*Unitywater is collecting your personal information for the purpose of providing the requested service. The collection of this information is authorised under the South East Queensland Water (Distribution and Retail Restructuring) Act 2009. Your information will not be given to any other person or agency unless required by law or we have your permission in writing*





Unitywater

ABN: 89 791 717 472

Assessment Checklist  
Sub-Meters

**(IMPORTANT NOTE: This assessment checklist is for Unitywater internal use.  
It has been included in this kit for information purposes only.)**

**Postal Address**  
PO Box 953  
Caboolture QLD 4510

**Unitywater Unit**  
Ph: 07 5431 8333  
Fax: 07 5431 8288

**Internet**  
[www.unitywater.com](http://www.unitywater.com)  
[development.services@unitywater.com](mailto:development.services@unitywater.com)

**Water Service Provider:**

Unitywater  
PO Box 953, Caboolture Qld 4510

**Description of land:**

Street address: \_\_\_\_\_  
*(Include no, street, suburb/locality and postcode)*

Real property description Lot: \_\_\_\_\_ Plan: \_\_\_\_\_  
*(Attach list if necessary)*  
Local Government Area: \_\_\_\_\_

**Related approvals:**

Development application no: \_\_\_\_\_  
Compliance permit/other: \_\_\_\_\_

**Responsible person:**

Under the Standard Plumbing and Drainage Regulation (SPDR) the responsible person means a person who:

1. Is a licensed person for the work and
2. Performs, directs the performance of, or supervises, the work

Name: \_\_\_\_\_

Company name if applicable: \_\_\_\_\_

Postal address: \_\_\_\_\_

Daytime contact number: \_\_\_\_\_ Mobile number: \_\_\_\_\_

Licence number: \_\_\_\_\_

**Plans/Compliance Permit:**

Under section 14A of the Standard Plumbing and Drainage Regulation 2003 (SPDR), if regulated work is to be performed on a building other than a building mentioned in subsection (2)(d), there must be a floor plan of the building showing the approximate location on the premises of each meter, and details of the specifications of each meter, for measuring the supply of water to any part of the premises. Meterable premises is defined in the Queensland Plumbing and Wastewater Code.

		Yes	No
Water supply to all meterable premises identified? (e.g. lots in a community title scheme and common property)			
Sole occupancy units in a class 2,4,5,6,7 or 8 building identified?			
Sole occupancy units in a class 5 building identified or 1 sub-meter per floor?			
Proof of consultation with the water service provider? (e.g. letter or certificate)			
Description of the approved sub-meter, specifications and equipment included with it? (e.g. automatic reading equipment)			
Location of sub meters identified on plans?			
Sub-meters located in the common area, common property or less than 3 meters from a public area?			
Number of sub meters to be installed			
Number of physical lots			
Town houses		Multi storey office block	
Shopping complex		Other (specify)	

**Inspection/Compliance Assessment:**

These key points are provided as a guide to inspecting/cross checking requirements for installation of sub-meters.

Additional requirements may apply in certain circumstances.

		Yes	No
Sub-meters installed in accordance with the approved plan?			
As-constructed plans submitted noting location of sub-meters?			
Have the approved sub-meters been installed?			
Are the sub-meters installed correctly?			
Sub-meters located in the common area, common property or less than 3 meters from a public area?			
Are the sub-meters easy to access for reading and maintenance?			
Has a complying valve been provided? <i>(Complying valve is defined in the Queensland Plumbing and Wastewater Code)</i>			
Water meter numbers assigned to correct unit number?			
Has the responsible person for installation of the sub-meter completed a Form 7? <i>Form 7 is a SPDR form providing 'Notification of Responsible Person'</i>			

**Completion:**

Name: \_\_\_\_\_

Company name: *(if applicable)* \_\_\_\_\_

Postal address: \_\_\_\_\_

Daytime contact number: \_\_\_\_\_ Mobile number: \_\_\_\_\_

I certify that all the information supplied is true and correct.

Name in full: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Privacy statement**

Unitywater is collecting your personal information for the purpose of providing the requested service. The collection of this information is authorised under the South East Queensland Water (Distribution and Retail Restructuring) Act 2009. Your information will not be given to any other person or agency unless required by law or we have your permission in writing

Assessment Checklist – Sub-Meters

<p><b>Notes – Use of columns</b>                  Install Date: Date meter was installed                  Meter #: The serial number of the water meter                  Size: The size of the meter in mm                  Make: The make of the meter                  Supply Type: Potable or Recycled meter                  Services: What the meter is connected to (see key opposite for abbreviations)                  Location: Physical location of meter at property (see key opposite for abbreviations)                  Tagged: All sub-meters have been tagged as per installation requirements                  Pass, Route and Sequence: Unitywater use only</p>	<p><b>Key Abbreviations</b>                  HSE - House                  UN - Unit                  THS - Townhouse                  FACT - Factory                  GYM - Gymnasium                  POOL - Pool Pump/Filter                  REST - Restaurant                  BATH - Bathroom                  OFF - Office</p> <p>HWS - Hot water system                  CT - Cooling tower</p> <p><b>Location</b>                  LHS - Left hand side                  RHS - Right hand side                  LVL - Level                  EID - Enclosure ID</p>	<p><b>Meter makes</b>                  ACT - Actaris                  ARAD - ARAD                  ELS - Elster                  RM - Reliance</p> <p><b>Supply type</b>                  POT - Potable                  REC - Recycled</p>
--	---	---

Site address:							Office use only				
							Operations			Retail	
Install date	Meter #	Size (mm)	Make	Supply type (Potable /Recycled)	Services (e.g. LVL 2 BATH – Level 2 Bathroom)	Location (e.g. 2M RHS LIFT #2 = 2 Metres right hand side lift #2)	Checked	Tagged	Passed	Route	Sequence

### Assessment checklist – Sub-meters

Site address:							Operations			Retail	
Install date	Meter #	Size (mm)	Make	Supply type (Potable /Recycled)	Services (e.g. LVL 2 BATH – Level 2 Bathroom)	Location (e.g. 2M RHS LIFT #2 = 2 Meters right hand side lift #2)	Checked	Tagged	Passed	Route	Sequence